

COMPRESSED AIR MAGAZINE

PUBLISHED BY



The Compressed Air Magazine Company

New York, London, Paris

General Editorial and Business Offices:
No. 11 Broadway, New York

INDEX TO VOLUME XXVII

JANUARY TO DECEMBER, 1922

(Copyright, 1923, by Compressed Air Magazine Co.)

COMPRESSED AIR MAGAZINE

INDEX TO VOLUME XXVII

JANUARY—DECEMBER, 1922

*Article Illustrated

A

Accidental Accidents (Editorial).....	236
Aerated Concrete.....	111
Aerial Activities (Editorial).....	148
Aerial Lloyd's Likely.....	246
Aerial Navigation.....	188
Aero Pump Dispenses Filtered Gasoline.....	202
Aerial Transportation in Honey Production.....	69
Age of Compressed Air (Cartoon).....	120
Air and Water Pressures.....	75
Air Bell within a Cofferdam.....	341
<i>Air Brake Catechism</i> , By Robert H. Blackall (Book Review).....	63
*Air Brakes Applied by Train Control Devices, Robert G. Skerrett.....	272
*Air Brush and its Uses, The—By Howard Beach.....	58
Air Choppers on London Pavements.....	334
*Air Compressors, Small Vertical Belt-Driven.....	321
*Air Compressors Pump Water in Anthracite Coal Mines, Herbert Axford.....	312
*Air Drill Saves Labor on Molding Machine.....	100
*Air Flow in Pipes for Large Volumes, By H. V. Haight.....	48
Air Free For All, Making The.....	258
*Air Grader for Separator, Homemade—.....	44
*Air Gun and Its Uses.....	174
*Air Gun, Jenkins.....	70
Air Gunner, The (Poem) Maurice, Morris.....	202
*Air Hoist Operates Belt Conveyer.....	75
Air in Driving Shield for Vehicular Tunnel (Editorial).....	61
Air Lift—and Air Lifts.....	289
Air Lift and Air Lifts, The.....	363
Air Lift Clears Sand from Deep Wells.....	83
*Air Lift for De-Watering Mines, By Herbert Axford.....	312
*Air Lift Helps in the Conversion of Sugar Cane Waste, S. G. Roberts.....	291
*Air Lift of the Chino Copper Co., By H. G. S. Anderson.....	9
*Air Messages Sent to Countless Homes, By Robert G. Skerrett.....	71
Air Movement in Mines, Physiological Effects of.....	359
*Air Operated Jack, An.....	33
*Air Operated Motor for Foundry.....	162
Air Lift Practice, British.....	7
Air Performs Big Chores in Warehouses and Docks.....	135
Airplane Problems to be solved by Experimenting (Editorial).....	177
Airplane Service Growing.....	229
Airplane Taxies.....	128
*Airplane used to Install "Little Tugger" Hoist.....	216
*Air Pressure, Plan to Equalize.....	330
Air Pressure To Cure Caisson Disease (Editorial).....	204
*Air Pushes Swing Saw.....	44
*Air Tool Reduces Labor of "Picking".....	198
*Air Used for Many Purposes at Southern Pacific Shops C. W. Geiger.....	189
Alaska, Mineral Resources of.....	336
*Alaska—Our Last Frontier, By C. K. Smullen.....	137
Alabama Co's Muscle Shoals Power Project.....	100
Alcohol, Power, in Sight.....	99
American Manufacturers, Distribution of (Editorial).....	61
<i>American Research Chemicals</i> , By C. J. West (Book Review).....	238
*Ammonia, First Accurate Measurements of Specific Heat of S. R. Winters.....	356
Anderson, H. G. S., Tailing Air Lift of the Chino Copper Co., The.....	9
Anderson, James W., *Pneumatic Tools in Foundry Practice.....	163
<i>Annual Report of the Smithsonian Institute</i> , By Government Printing Office (Book Review).....	63
<i>Annual Report of the Smithsonian Institute</i> , By Government Printing Office (Book Review).....	238
*Anthracite Coal Region, Unusual Drilling Operations in—By C. T. Chapman.....	134
*Argonaut Mine, How the Rescue Work was Carried Out, S. G. Roberts.....	353
Arizona Water Power Development.....	111

Artesian Wells.....	272
"Asche" F. D., Salvaging of Oil Tanker, Robert G. Skerrett.....	169
Ashfield, Lord (Editorial).....	300
Atomic Weights Fixed.....	14
Atoms Enslaved (Editorial).....	91
Automatic Train Control Apparatus To Improve Railway Operation (Editorial).....	300
*Automatic Train Control Devices, Robert G. Skerrett.....	272
Automobile Demand and Production.....	226
Automobile Industry, Growth and Magnitude of.....	172
Australian Developments.....	288
Axford, Herbert, *Air Lift for De-Watering Mines.....	312

B

Babson Report, Compressed Air Uses, etc.....	136
*Bagasse, Insulating Lumber from, S. G. Roberts.....	291
Basalt Handled Like Putty.....	227
Beach, Howard, *Air Brush and Its Uses, The—.....	58
Bear Mountain Bridge.....	350
Belgian Government Support for Aviation (Editorial).....	119
Belting, Method for Figuring Fabric.....	69
Belt Poorly Repaired, A.....	361
*"Bends" Victims Recover in Air Tank.....	194
Bensel, John A. (Obituary).....	229
Bicknell, H. L., *Butte System of Square Set Stopping.....	113
Blackburn, Ward, *How to Equip a Prospect.....	360
*Boiler Tubes Cleaned by Compressed Air, Sidney Mornington.....	233
Boiler Tubes Cleaned by Sand Blast.....	299
Boll Weevil Catcher.....	350
Booth & Flinn, Vehicular Tunnel Contractors.....	100
Brainerd, H. S., *Drill Steel—Its Forging and Heat Treatment.....	302
*Branford Vibrator Riddle.....	111
Brazilite, New High Explosive.....	166
*Brick Kiln, Taking the Laboratory to the.....	366
Bricks, By Product of Oil Shale.....	133
Bridgman, P. W., *Methods of Handling Very High Pressures.....	17
Briggs, Roland H., Compressed Air at Work on London Bridge.....	32
Briggs, Roland H., *Pneumatic Equipment of Huge Repair Works in London.....	217
British Air Lift Practice.....	7
Bucklew, C. W., *Amplifying the Drainage Facilities of the Stampede Tunnel.....	281
Building Industry and Prosperity (Editorial).....	236
Business Recovery, The (Editorial).....	270
*Butte System of Square Set Stopping, By H. L. Bicknell.....	113

C

Caisson Disease Cured by Air Pressure (Editorial).....	204
*Caissons Finally Seated by Compressed Air, Frank W. Skinner.....	358
*Caissons for Coal Mine Shaft, E. T. Gott.....	343
*Caissons, Successful Sinking of Vehicular Tunnel, By Robert G. Skerrett.....	41
*California Canneries Employ Compressed Air, By C. W. Geiger.....	14
*California Railroads Conserving Fuel Oil.....	203
Calumet Baking Powder Co's System of Handling Rice Hulls.....	147
*Calyx Drill, Novel Application of. By H. Wood.....	19
*Camden Bridge Connects Philadelphia with Camden. By Robert G. Skerrett.....	80
<i>Cams-Elementary and Advanced</i> . By Franklin DeRonde.....	31
*Canneries in California. By C. W. Geiger.....	14
Car Dumper, Largest in World.....	62
Carbon Monoxide Gas.....	87
Carbon Monoxide Poisoning.....	288
Carr, W. E. *Pneumatic Drill Success as a Screwdriver.....	289

Catskill Water Supply System, New York.....	314
*Celotex, Insulating Lumber from. S. G. Roberts.....	291
<i>Century Volume of Chas. Griffin & Co., The</i> By Chas. Griffin & Co. (Book Review).....	63
Chapman, C. T. *Unusual Drilling Operations in Anthracite Coal Region.....	134
Charlton, D. E. A. The Service Engineer.....	136
Chicha Nuts in South America.....	100
*Chile, Mining Sodium Nitrate in. Peter A. Raymond.....	323
China's Grand Canal.....	250
*Chino Copper Co., Tailing Air Lift of the. By G. H. S. Anderson.....	9
*Cholla Edible by Flame, Making the.....	357
Coal Dust Explosions.....	246
*Coal Mining in the Lens District. By Charles Moreau.....	123
*Coal Mining, Increasing Use of Compressed Air in. By Richard H. Tingley.....	141
*Coal Pile, Labor Saving at the.....	290
*Clay Diggers, Pneumatic, Speed Sewer Work. R. A. Lundell.....	167
*Clay Digger Reduces Labor of Picking.....	198
*Cold Storage, What It Means to Us. By Robert G. Skerrett.....	1
Colliery Problem Solved by Compressed Air.....	20
Compressed Air Aids in Cure of Tuberculosis (Editorial).....	30
*Compressed Air Aids in Manufacture of Roofing.....	219
*Compressed Air Aid: Oxy-Acetylene Welding Job.....	173
Compressed Air in the Barber Shop.....	288
*Compressed Air for Cleaning Gas Piping. J. T. Griffin.....	195
*Compressed Air in Coal Mining. By Richard H. Tingley.....	141
*Compressed Air, Controlling Production by. Joseph Salathiel.....	322
Compressed Air Conveying in France.....	260
Compressed Air Does Much Helpful Work in Bank.....	352
*Compressed Air Employed in California Canneries. By C. W. Geiger.....	14
*Compressed Air Employed in Combating Forest Fires.....	282
Compressed Air Emptying Oil Barrels.....	8
Compressed Air Fire Alarm.....	62
*Compressed Air in the Foundry. Richard H. Tingley.....	153
*Compressed Air in the Foundry. L. W. Schnitzer.....	185
*Compressor for Foundry Purposes.....	159
Compressed Air Gun.....	171
*Compressed Air Handles Various Kinds of Bulk Materials. Rudolph Welcker.....	230
*Compressed Air Leaks Detected by Geophone. C. Moran.....	342
*Compressed Air Necessary in Making Highway Tests. C. W. Geiger.....	259
*Compressed Air Operates Ditchers on Railway Work.....	184
*Compressed Air Operates Stabilizer for Helicopter.....	202
Compressed Air Paving Breaker Gets Busy (Cartoon).....	239
*Compressed Air Pipe Serves as Hand Rail.....	100
*Compressed Air for Pipe, Tunnel and Trench Work.....	299
Compressed Air Pumps Sand Out of Well.....	227
*Compressed Air Replaces Shuttle.....	232
*Compressed Air Roof for Paul Poiret's Paris Theatre. Ben K. Raleigh.....	279
*Compressed Air Solves Colliery Problem.....	20
Compressed Air Used to Coat Tractors for Shipment.....	357
Compressed Air Used Extensively in Municipal Shops.....	294
*Compressed Air Uses in Harbor Improvement, New York. By Eugene P. McCorken.....	49
Compressed Air Used for Hydraulic Accumulators.....	147
Compressed Air Used in Killing Insects.....	75
Compressed Air Used for Pitching Baseballs.....	43
*Compressed Air Used in Repair Truck. By C. W. Geiger.....	76
*Compressed Air Used to Sink Unusual Mine Shaft. E. T. Gott.....	343
Compressed Air at Work on London Bridge. By Roland H. Briggs.....	32
Compressor Has Put the Tinkler in the Tumbler (Editorial).....	271
Conant, R. C. *High Pressure Gas Station, Novel.....	88
Concrete Pipe Manufacture.....	232
*Concrete, Pneumatic Placing of. Sidney Mornington.....	191
*Condenser, Small Surface.....	212
Connaugh Tunnel, By Sidney Mornington.....	191
<i>Conquests of Invention.</i> By Mary R. Parkman (Book Review).....	93
*Consolidated Gas, Electric Light and Power Company. J. T. Griffin.....	195
Conveyer Operated by Air Hoist.....	75
*Conveyer Operated by Compressed Air.....	282
Copper Company Seven Centuries Old.....	239
Copper Shingle Trade Grows Rapidly.....	175
Cotton Production.....	366
*Cotton-Testing Laboratory, Compressed Air in the. S. R. Winters.....	297
Core Drilling Bit.....	146
*Crane, Motor-Operated, Twenty Years in use.....	162

D

*Dam at Lost River, Unique Horseshoe.....	311
Danger Sign, An Effective.....	361

De-aerating the Water for Transmission.....	111
Deepest Mine in the World.....	330
De-Ironing Water with Air.....	219
*Delaware River Suspension Bridge. By Sidney Mornington.....	80
Detroit-Windsor Bridge.....	83
*De-Watering Mines, Air Lift for. Herbert Axford.....	312
*Ditchers on Railway Work Operated by Compressed Air.....	184
*Dravo Contracting Co. Carries Caissons for Coal Mine Shaft. E. T. Gott.....	343
*Drilling Operation at Scajaquada Creek. By G. W. Winslow.....	46
*Drilling Operations in Anthracite Coal Region. By C. T. Chapman.....	134
*Drill Steel—Its Forging and Heat Treatment. By H. S. Brainerd.....	302
Drill Steels, Saving of. C. C. Hansen.....	351
Dunn, D. E. *Holing Through the Shandaken Tunnel Between Shafts.....	223
Dust Carried Overseas.....	297
Dust Particles in the Air.....	70

E

Eckart, Nelson A. and Stocker, Leslie W. *San Francisco's Hetch Hetchy Water Supply, Part I.....	207
Eckart, Nelson A. and Stocker, Leslie W. *San Francisco's Hetch Hetchy Water Supply, Part II.....	247
Eckart, Nelson A. and Stocker, Leslie W. *San Francisco's Hetch Hetchy Water Supply, Part III.....	283
Eckart, Nelson A. and Stocker, Leslie W. *San Francisco's Hetch Hetchy Water Supply, Part IV.....	315
<i>Editorials and Editorial-Writing.</i> By Robert Wilson Neal. (Book Review).....	151
*Electric Pneumatic Switches, Bleeding.....	268
*Electrification of French Railroads.....	331
Electrothermic Metallurgy of Zinc.....	33
<i>Elements of Mechanism.</i> By Schwamb-Merrill James. (Book Review).....	93
Emersonian Mouse Trap Theory, the (Editorial).....	119
*Enameling Large Steel and Iron Containers. Robert G. Skerrett.....	213
Engineer, The Service. By D. E. A. Charlton.....	136
Engineering Co-operation (Engineering).....	237
Engineering News-Record and St. Lawrence Seaway (Editorial).....	237
Engineering Societies Organize.....	268
England and France, Unemployed in (Editorial).....	363
<i>Evolution of the Oil Industry, The.</i> By Victor Ross.....	31
Explosive, New High.....	166
Explosives, A Costly Lesson In.....	14
Explosives in Steel Works. By R. T. Slee.....	16
<i>Export Packing.</i> By C. C. Martin (Book Review).....	272
Eyesight, Saving, In Industry (Editorial).....	207

F

Fabric Belting, Method for Figuring, By W. F. Schaphorst.....	69
*Fabric Tests. By S. R. Winters.....	70
Federal Railroad Valuation, The (Editorial).....	90
Filters Capable of treating 2,000,000 gallons of water in 24 hours.....	219
Finance, Deflation in. (Editorial).....	237
*Forest Fires Combated with Compressed Air.....	282
*Forging and Heat Treatment of Drill Steel. H. S. Brainerd.....	303
*Foundations Sunk to Rock by Means of a New Method. Joseph Salathiel.....	228
*Foundry, Compressed Air Applied to the. Richard H. Tingley.....	153
*Foundry, Compressed Air in the. L. W. Schnitzer.....	185
*Foundry, Compressor for the.....	159
*Foundry, Pneumatic Tools in. James W. Anderson.....	163
<i>Fundamentals of Accounting, The.</i> By William Morse Cole, A.M.....	31
France, Additions to Port of.....	229
*French Railroads, Electrification of.....	331
Frozen, Face The (Editorial).....	301
*Fuel Oil Conserved by California Railroads.....	203

G

Gas for Airships.....	281
*Gas Distribution System of Western United Gas & Electric Co. C. W. Melcher.....	251
Gases for Heating.....	292
Gases for Killing Bird Pests.....	166
Gasoline Recovery from Petroleum (Editorial).....	205
*Gas Pipe Laying Reduces Labor Item. Robert A. Lundell.....	255
*Gas Piping, Compressed Air for Cleaning. J. T. Griffin.....	195
Gas, Uses for.....	59
Gardner, E. D. *Air Operated Ventilation Doors in Copper Mines.....	27

Geiger, C. W. *Air Used for Many Purposes at Southern Pacific Shops.....	189
Geiger, C. W. *California Canneries Employ Compressed Air.....	14
Geiger, C. W. *Compressed Air Necessary in Making Highway Tests.....	259
Geiger, C. W. *Highway Repair Truck Uses Air Devices.....	76
*Geophone in Its Perfected Form. C. Moran.....	342
Gilboa Dam.....	62
Glaciers at the Equator.....	288
Glass, Bubbles in.....	16
*Glass Pots Fashioned Mechanically.....	332
Glass, Unbreakable, Now Produced.....	194
*Goldbeck Device for Measuring Soil Pressures. S. R. Winters.....	226
Gold Movements, Economics of (Editorial).....	91
*Gold and Silver Production, World's Present Status. By Richard Hoadley Tingley.....	21
Gott, E. T. *Compressed Air Used to Sink Unusual Mine Shaft.....	343
Gow, Alexander M. (Obituary).....	150
Greensfelder, N. S. *Manufacture of Naval Stores.....	199
Griffin, J. T. *Compressed Air for Cleaning Gas Piping.....	195
Gunitite in Preserving Mine Timbers, Use of.....	361

H

<i>Handbook of Chemistry and Physics.</i> By Chas. D. Hodgman. (Book Review).....	238
<i>Handbook of the Petroleum Industry.</i> By David T. Day. (Book Review).....	272
Hansen, C. C. Saving of Drill Steels.....	351
*Harbor Improvement for World Trade. By Eugene P. McCrorken.....	49
Havelock Trap-rock Quarry.....	166
*Hay Conditioner Uses Air Moisture. S. R. Winters.....	172
*Heat Treatment and Forging of Drill Steel. By H. S. Brainerd.....	302
Height, H. V. *Figuring Air Flow in Pipes for Large Volumes.....	48
Helicopter Progress (Editorial).....	237
Helicopter, To Encourage, The (Editorial).....	90
Helium Gas.....	227
*Helium's First Use in Aviation.....	112
Hemp Waste.....	302
*Hetch Hetchy Water Supply Project.....	99
*Hetch Hetchy Water Supply in San Francisco, Part I Nelson A. Eckart and Leslie W. Stocker.....	207
*Hetch Hetchy Water Supply in San Francisco, Part II Nelson A. Eckart and Leslie W. Stocker.....	247
*Hetch Hetchy Water Supply in San Francisco, Part III Nelson A. Eckart and Leslie W. Stocker.....	283
*Hetch Hetchy Water Supply in San Francisco, Part IV Nelson A. Eckart and Leslie W. Stocker.....	315
Highbrow and His Breakfast, The.....	334
*High-Pressure Gas-Distribution System. C. W. Melcher.....	251
*High-Pressure Gas Station, Novel. By R. C. Conant.....	88
*High Pressures, Methods of Handling. By P. W. Bridgman.....	17
*Highways, Boring Into Secrets of.....	146
*Highway Tests, Compressed Air Necessary in Making. Charles W. Geiger.....	259
Hottest Region in the United States.....	193
Hudson River Vehicular Tunnel.....	325
*Hudson River Vehicular Tunnel Caissons. By Robert G. Skerrett.....	41
*Hudson Tunnel, Research Reveals How to Ventilate. By Robert G. Skerrett.....	101
Hydro-Electric Developments in France.....	361
*Hydro-Electric Development of Skagit River.....	294
Hydro-Electric Installations.....	272
Hydrogen, Spontaneous Ignition of.....	235

I

*Ice, Artificial, in the Ascendency. Robert G. Skerrett.....	241
*Ice-Making Machinery. Robert G. Skerrett.....	241
*Ice Manufacture at City Ice Company, Easton, Pa. Sidney Mornington.....	347
Industrial Conditions, General Improvement in (Editorial).....	177
Industrial Machinery Abroad (Editorial).....	118
<i>Industrial Hydrogen.</i> By Hugh S. Taylor (Book Review).....	121
Insects Killed by use of Compressed Air.....	75
International Air Congress.....	290
International Engineering Conference, Proposed (Editorial).....	176
<i>Introduction to the Study of Labor Problems, An.</i> By Gordon S. Watkins (Book Review).....	364
Inventors, Famous, Struggle for Recognition (Editorial).....	204
Inventor and Investor Brought Together (Editorial).....	62
Iron Ore Laboratory.....	70
Iron-Removing Filters.....	219
Italian Engineer Honored.....	321

J

Jacks, Air Operated.....	33
*Jenkins Air Gun.....	70
Junk, Immense Sums from (Editorial).....	90

K

*Kinks for Cutting Belts. By W. F. Schaphorst.....	147
Kuhman, L. F. *Portable Compressor for Bridge Work.....	8

L

*Latavia, Republic of. N. A. Tschernoff.....	220
Latin America, Our Business Prospects in (Editorial).....	362
Leather Belting, Testing Efficiency of.....	341
Leather Much Affected by Moisture.....	296
*Leather, Sole, Modern Method of Tanning, The. R. G. Skerrett.....	179
*Leather for the Upholstering of Automobiles. Robert G. Skerrett.....	337
Leakage in Rock-Filled Dams.....	219
Legume Crops Get Nitrogen from the Air.....	365
*Lehigh & Wilkes-Barre Coal Company Drilling Operations. By C. T. Chapman.....	134
*Lens Coal Mining District, Reconstruction Problem in the. By Charles Moreau.....	123
"Lest We Forget" (Editorial).....	118
Life's Latest Milestone-New Year's 1922 (Editorial). By Frank Richards.....	30
Liquid Air for Mine Rescue Apparatus.....	352
Liquid Air, Novel Use of.....	100
<i>Liquid Fuel, Burning.</i> By Dr. William Newton Best (Book Review).....	121
Liquid Oxygen Explosives.....	172
Literature, Technical, in Foundry Field (Editorial).....	176
London Bridge, Compressed Air at work on. By Roland H. Briggs.....	32
London Fogs May Become Only a Tradition (Editorial).....	301
Lord and Lords in England (Editorial).....	300
*Lost River Horseshoe Dam.....	311
Lundell, R. A. *Pneumatic Clay Diggers Speed Sewer Tunnel Work.....	167
Lundell, R. A. *Reducing the Labor Item in Laying Gas Pipe.....	255

M

<i>Manufacture of Pulp and Paper, The.</i> By J. J. Clark. (Book Review).....	62
*Marsh Portable Journal Turning Machine.....	352
*Martin Air Dog.....	298
*Mary Saved the Ship. Sidney Mornington.....	293
<i>Masonry Structures.</i> By Frederick P. Spaulding. (Book Review).....	121
<i>Materials of Construction.</i> By Adelbert P. Mills. (Book Review).....	151
*Maytown Tunnel, Progress Made Under Trying Conditions. M. P. Smith.....	295
McCrorken, Eugene P. *Improving North American Sea Port for World Trade.....	49
McDonald, P. B. Science and Superstition.....	161
McIntosh, O. C. *Pneumatic Paving Breakers and the Portable Compressor Win Recognition in London, The.....	346
Melcher, C. W. *High-Pressure Gas Distribution System of the Western United Gas & Electric Co.....	251
*Metals, Cutting, Under Water. By Robert G. Skerrett.....	129
Metal Markets, Publicity Helps to Expand The.....	177
<i>Metric System for Engineers.</i> By Charles B. Clapham. (Book Review).....	272
Metric System.....	235
Metric System Status of the (Editorial).....	61
<i>Mexican Yearbook, The.</i> By Robert Glass Cleland. (Book Review).....	336
<i>Mica.</i> By Oliver Bowles. (Book Review).....	238
Mid-Summer Reinforcement (Editorial).....	204
Miliukov, Prof. Paul N. *Russia's Plight—Why Trade Resumption Fails to Materialize.....	108
*Mine Timbers Drilled on Home-Made Press.....	19
Mineral Resources of Alaska.....	336
Mining in Literature.....	62
Mining Terms—Animal's Names.....	117
Mines, Department of.....	44
<i>Modern Tunneling.</i> By David W. Brunton and John A. Davis (Book Review).....	151
*Molding Machine, Air Drill Saves Labor on.....	100
Monoxide Poisoning, Simple Test For.....	216
Moran, C. *Geophone in Its Perfected Form, The.....	342

Moreau, Charles. *Reconstruction Problem in the Lens Coal Mining District.....	123
Mornington, Sidney. *Bridging the Delaware between Philadelphia and Camden.....	80
Mornington, Sidney. *Clean Tubes Essential to Boiler Efficiency.....	233
Mornington, Sidney. *How Mary Saved the Ship.....	293
Mornington, Sidney. *Impressive Example of Progress in the Manufacture of Ice.....	347
Mornington, Sidney. *Pneumatic Placing of Concrete, The.....	191
Mornington, Sidney. *Submarine Cargo Carrier Will Shorten Trade Routes.....	264
Morris, Maurice. Air Gunner, The.....	202
Morrison, G. W. *Niagara Falls Power Development increased by 200,000 H. P.....	65
Morse-Bell-Marconi (Editorial).....	271
*Motion Pictures to Boom American Business.....	269
Movie Film, Widening the Field of the (Editorial).....	335
Municipal Shops Use Compressed Air.....	294
Muscle Shoals Power Project.....	100

N

*Naval Stores, Manufacture of. N. S. Greensfelder.....	199
*Niagara Falls Power Development Increased by 200,000 H. P. By G. W. Morrison.....	65
*Nitrate in Chile, Mining Sodium. Peter A. Raymond.....	323
Noah's Ark (Editorial).....	335

O

Oil in Alberta.....	302
Oil Barrels Emptied by Compressed Air.....	8
Oil Distillation, The Most Costly Method (Editorial).....	62
Oil Dock at Manchester, England.....	330
Oil Fields, Rejuvenation of Old (Editorial).....	362
Oil Shale Investigations.....	203
*Omnibus Company Operates over 3,000 Omnibuses. Roland H. Briggs.....	217
*Orthia, British Merchant Fleet and Scotch Craft. Sidney Mornington.....	293
Overseas Communication by Modern Wireless (Editorial).....	29
Oxy-Acetylene Welders Protected by suit.....	238
*Oxy-Acetylene Welding Job aided by Compressed Air.....	173
Ozone for Seasoning Timber.....	188

P

*Paint and Other Materials Applied by Air Brush. By Howard Beach.....	58
Paint Spray, Steady Work for.....	168
Panama Canal and Great Lakes—St. Lawrence (Editorial).....	205
Panama Canal, Recollections of Early Days. By W. L. Saunders.....	77
Paper, Makings of.....	311
Patent Office, Pity the (Editorial).....	61
*Petrograd of Today.....	327
Petrograd, Cable Communication Completed (Editorial).....	118
Petroleum Manipulation.....	48
Pessimism Not Needed Now but Constructive Thought (Editorial).....	270
Philadelphia Bridge, The.....	32
Pipe Strengths for Use as Columns, Finding.....	162
*Pipe, Tunnel and Trench Work.....	299
*Pittsburgh and Shawmut Railroad Tunnel. Sidney Mornington.....	191
Pneumatic Caisson Record.....	302
Pneumatic Conveying at London Docks.....	88
*Pneumatic Clay Diggers Speed Sewer Tunnel Work. R. A. Lundell.....	167
*Pneumatic Devices Perform Many Useful Operations in the Foundry. L. W. Schnitzer.....	185
*Pneumatic Dog for the Sawmill, A.....	298
*Pneumatic Drill Success as a Screwdriver. W. E. Carr.....	289
*Pneumatic Equipment of Huge Repair Works in London. Roland H. Briggs.....	217
Pneumatic Grain Elevators for Glasgow.....	314
*Pneumatic Hammer Supplants Sculptor's Mallet. S. G. Roberts.....	261
*Pneumatic Paving Breaker and Portable Compressor in London. O. C. McIntosh.....	346
*Pneumatic Placing of Concrete, The. Sidney Mornington.....	191
*Pneumatic Saw Trims Freight Car Roofs.....	260
*Pneumatic Tools Break Ground for Signal Tower.....	240
*Pneumatic Tools in Foundry Practice. James W. Anderson.....	163
*Pneumatic Tools Lower Cost in Laying Six-Mile Gas Main. Robert A. Lundell.....	255

Pneumatic Tools Used in Finishing Stone.....	212
Politics and the Tariff (Editorial).....	28
*Portable Compressor for Bridge Work. By L. F. Kuhman.....	8
*Portable Compressor and Pneumatic Paving Breaker Win Recognition in London. O. C. McIntosh.....	346
Portable Journal Turning Machine.....	352
Postal Chief Engineer, A. (Editorial).....	334
Potatoes in Maine.....	271
*Press, Home-made, Mine Timbers Drilled on.....	19
Pressure Gage.....	292
*Pressure up to Five Hundred Pounds. By P. W. Bridgman.....	17
Price Paid for Waste in Industry, The (Editorial).....	60
<i>Principles of Mechanical Refrigeration.</i> By H. J. MacIntire. (Book Review).....	206
*Prospect, How to Equip A. Ward Blackburn.....	360
Prosperity, Road To (Editorial).....	148
Pulverized Fuel Handled by Compressed Air.....	322

Q

Quarrie, Bertram D.....	364
-------------------------	-----

R

Radio (Editorial).....	176
Radio for Mine Rescue Work.....	238
Radio in a New Role (Editorial).....	301
*Radio Telephony. By Robert G. Skerrett.....	71
Radium.....	226
*Railroads Equipped with Train Control Devices. Robert G. Skerrett.....	272
Railway Electrification, Wide Activity in.....	44
Railway, Gages, and Industrial Waste.....	280
Raindrops, The Professor on Dodging.....	331
Raleigh, Ben K. *Compressed Air Roof for Paul Poiret's Paris Theatre.....	279
Raleigh, Ben K. *Compressing Carbonic Acid Gas to Stimulate Plant Growth.....	95
Raymond, Peter A. *Mining Sodium Nitrate in Chile.....	323
<i>Red Cross Series</i> (Book Review).....	336
*Refrigerating Installation at Easton, Pa. Sidney Mornington.....	347
*Refrigerator Car Developed for Hauling Perishable Commodities. S. R. Winters.....	333
Refrigerator Ships, Growing Demand for (Editorial).....	300
Respirators for Men on Locomotives.....	345
Rice Hulls Handled with Air.....	147
Richards, Frank. At Life's Latest Milestone, New Year's 1922.....	30
Richards, Frank. Curious Things in Ordinary Weather Conditions.....	296
Road Building (Editorial).....	335
Road Building the Greatest National Industry.....	136
Road Making Equipment (Editorial).....	176
Roberts, S. G. *Argonaut Mine, How the Rescue Work was Carried Out.....	353
Roberts, S. G. *Compressed Air in the Realm of Art.....	261
Roberts, S. G. *Insulating Lumber from Bagasse.....	291
*Rock Bearing Foundations. Joseph Salathiel.....	228
*Rock Drill, Birth and Development of. By W. L. Saunders.....	45
Rock Drill Worker.....	147
Rope Transmission, Long.....	184
*Rotary Tank Cars Designed to Handle Bulk Materials. Rudolph Welcker.....	230
Roumanian Mines, Expansion Movement for. (Editorial).....	149
*Rove Tunnel, France. By H. Villetard.....	55
Russian Government, Changing Policies of. (Editorial).....	29
*Russia's Plight—Why Trade Resumption Fails to Materialize. By Prof. Paul N. Miliukov.....	108

S

Salathiel, Joseph. *Controlling Production by Compressed Air.....	322
Salathiel, Joseph. *Sinking Foundations to Rock by Means of a New Method.....	228
*Saltpeter Obtained from Nitrate Beds in Chile. Peter A. Raymond.....	323
*Salt Mining.....	89
*Salvaging of the Oil Tanker "F. D. Asche". Robert G. Skerrett.....	169
<i>Sampling and Analysis of Pig Iron, The.</i> By Carnegie Steel Co. (Book Review).....	364
Sand Blast for Cleaning Boiler Tubes.....	299
Sands in Aluminum-Alloy Foundry Practice.....	184
Sand Pumped Out of Well by Compressed Air.....	227
Sand-Screening with a Blower.....	260
*San Francisco's Hetch Hetchy Water Supply—Part I. Nelson A. Eckart and Leslie W. Stocker.....	207
*San Francisco's Hetch Hetchy Water Supply—Part II. Nelson A. Eckart and Leslie W. Stocker.....	247

*San Francisco's Hetch Hetchy Water Supply—Part III. Nelson A. Eckart and Leslie W. Stocker.....	283
*San Francisco's Hetch Hetchy Water Supply—Part IV. Nelson A. Eckart and Leslie W. Stocker.....	315
Santa Claus and Service (Editorial).....	362
Saunders, W. L. *Birth and Development of the Rock Drill, The.....	44
Saunders, W. L. *Recollections of the Early Days of the Panama Canal.....	77
*Saw, Pneumatic, Trims Freight Car Roofs.....	260
*Scajaquada Creek, A Difficult Drilling Operation. By G. W. Winslow.....	46
Schaphorst, W. F. Finding Pipe Strengths for use as columns.....	162
Schaphorst, W. F. *Kinks for Cutting Belts.....	147
Schaphorst, W. F. Method for figuring Fabric Belting.....	69
Science and Superstition. P. B. McDonald.....	161
<i>Scientific Selling and Advertising</i> . By Arthur Dunn (Book Review).....	302
Schnitzer, L. W. *Compressed Air in the Foundry.....	185
*Shandaken Tunnel, Holing Between Shafts Nos. 5 and 6. D. E. Dunn.....	223
*Shuttle Replaced by Compressed Air.....	232
*Separator with Homemade Air Grader.....	44
<i>Service Station Management</i> . By Charles L. Jones. (Book Review).....	178
Sierra Nevada Crest.....	282
Signal Tower Installed on Fifth Ave.....	240
Silk, Artificial.....	302
*Silver and Gold Production, World's Present Status. By Richard Hoadley Tingley.....	21
Simplified Products Reduce Cost (Editorial).....	148
*Skagit River Hydro-Electric Development, The.....	294
Skerrett, R. G. *American Salvors Re-Establish Their Pre-eminence.....	169
Skerrett, Robert G. *Artificial Ice in the Ascendancy.....	241
Skerrett, Robert G. *Cold Storage What it means to Us.....	1
Skerrett, Robert G. *Cutting Metals Under Water.....	129
Skerrett, Robert G. *Enameling Large Steel and Iron Containers.....	213
Skerrett, Robert G. *Leather for the Upholstering of Automobiles.....	337
Skerrett, Robert G. *Modern Method of Tanning Sole Leather.....	179
Skerrett, Robert G. *Research Reveals How to Ventilate Hudson Tunnel.....	101
Skerrett, Robert G. *Robbing Railroad of Some of Its Hazards.....	272
Skerrett, Robert G. *Sending Millions of Air Messages to Countless Homes.....	71
Skerrett, Robert G. *Successful Sinking of Two Great Caissons.....	41
Skinner, Frank W. *Caissons Finally Seated by Compressed Air at South Street Bridge.....	358
Skinner, Frank W. *Underpinning with and without Compressed Air.....	84
Slee, R. T. Explosives in Steel Works, The Use of.....	16
Smith, M. P. *Fine Progress Made on May Town Tunnel.....	295
Smullen, C. Kenneth. *Alaska—Our Last Frontier.....	137
Soap.....	268
*Soil Pressures, Device for Measuring. S. R. Winters.....	226
*Sole Leather, Modern Method of Tanning. R. G. Skerrett.....	179
Sounding by Sound with Weight Method.....	202
*Southern California Edison Co.'s Big Creek Project.....	263
Southern California Edison Co.'s Big Creek Power House.....	216
*Southern Pacific Shops, Air Used for Many Purposes. C. W. Geiger.....	189
*South Street Bridge (Philadelphia) Caissons. Frank W. Skinner.....	358
*Specific Heat of Ammonia, First Accurate Measurements of. S. R. Winters.....	356
*Stabilizer for Helicopter Operated by Compressed Air.....	202
St. Lawrence Project, Massachusetts Industries Report on.....	128
St. Lawrence Project (Editorial).....	149
St. Lawrence Seaway (Editorial).....	237
St. Lawrence Seaway and Congestion at Buffalo (Editorial).....	362
Stainless Steel, New Precious Metal (Editorial).....	335
*Stampede Tunnel, Amplifying the Drainage Facilities of. C. W. Bucklew.....	281
<i>Standardization Bulletin of the American Mining</i> . By American Mining Congress (Book Review).....	206
*Staten Island—"Narrows Syphon". By Robert G. Skerrett.....	129
<i>Stationary Steam Engines and Oil Engines</i> . Vacuum Oil Company.....	31
Steel Columns Effect Saving in Building.....	235
Steam Shovel, How Much Does it Cost to Run a.....	365
Steel, U. S. Corporation (Editorial).....	236
Stocker, Leslie W. and Eckart, Nelson A. *San Francisco's Hetch Hetchy Water Supply—Part I.....	207
Stocker, Leslie W. and Eckart, Nelson A. *San Francisco's Hetch Hetchy Water Supply—Part II.....	247

Stocker, Leslie W. and Eckart, Nelson A. *San Francisco's Hetch Hetchy Water Supply—Part III.....	283
Stocker, Leslie W. and Eckart, Nelson A. *San Francisco's Hetch Hetchy Water Supply—Part IV.....	315
Stopping, Square Set, Butte System of. By H. L. Bicknell.....	113
Stratton, Dr. Samuel Wesley (Editorial).....	363
<i>Study of the Manufacture, Properties and Uses of Carbon Black</i> . A. By Roy O. Neal. (Book Review).....	302
*Submarine Cargo Carrier Will Shorten Trade Routes. Sidney Mornington.....	264
*Submarine Torch and Compressed Air. By Robert G. Skerrett.....	129
Suction Conveys Refuse in 700 foot Pipe Line.....	175
Superstition and Science. P. B. McDonald.....	161
Swiss Federal Railways Electrified.....	75
*Switches and Frogs Cleaned by Compressed Air.....	70

T

*Tanning Sole Leather, Modern Method of. R. G. Skerrett.....	179
Telephony, Serbian's Contribution to (Editorial).....	149
Tanksgiving, Reasons for. (Editorial).....	334
*Theatre Roof Raised by Compressed Air. Ben K. Raleigh.....	279
Timber, Peel The.....	172
Timber Seasoning Zone.....	282
*Tin Mining, Smelting and Marketing. By Richard Hoadley Tingley.....	35
*Tin, The World's. By Richard Hoadley Tingley.....	35
Tingley, Richard H. *Compressed Air Applied to the Foundry.....	153
Tingley, Richard H. *Increasing Use of Compressed Air in Coal Mining.....	141
*Tingley, Richard Hoadley. *Present Status of the World's Gold and Silver Production, The.....	21
Tingley, Richard Hoadley. *World's Tin, The.....	35
Tractors Coated by Compressed Air.....	357
*Train Control Devices. Robert G. Skerrett.....	272
<i>Treatise on Milling and Milling Machines, A</i> . By Cincinnati Milling Machine Co. (Book Review).....	364
*Truck in Operation by Compressed Air in Highway Repair. By C. W. Geiger.....	76
Tschernoff, N. A. *Republic of Latvia, The.....	220
Tuberculosis, Compressed Air Aids Cure of. (Editorial).....	30
Tunnel, Connaugh. By Sidney Mornington.....	191
*Tunnel, Maytown, Progress Made Under Trying Conditions. M. P. Smith.....	295
*Tunnel of the Rove, Largest Ever Constructed. By H. Villetard.....	55
*Tunnel, Shandaken, Holing Between Shafts 5 and 6. D. E. Dunn.....	223
*Tunnel from Skagit River, Seattle.....	294
*Tunnel, Stampede, Amplifying the Drainage Facilities of. C. W. Bucklew.....	281
Tunnel, Vehicular. By Robert G. Skerrett.....	101
*Tunneling Record in Hard Rock.....	263
*Turpentine, Rosin and Pine Oils Extracted from Stumps and Down Wood. N. S. Greensfelder.....	199
<i>Twentieth Century Guide to Correct Pronunciation</i> . By H. D. Vincent. (Book Review).....	364

U

<i>Una-Flow Steam Engine, The</i> . By J. Stumpf. (Book Review).....	206
*Underpinning with and without Compressed Air. By Frank W. Skinner.....	84
Under-Water Repair Job.....	188

V

Vacuum Pump Makes Conservation Possible (Editorial).....	270
*Vehicular Tunnel. By Robert G. Skerrett.....	101
*Vehicular Tunnel, Hudson River. By Robert G. Skerrett.....	41
Vehicular Tunnel Shields (Editorial).....	61
*Ventilation Doors in Copper Mines, Air Operated. By E. D. Gardner.....	27
*Ventilation of Hudson River Vehicular Tunnel. By Robert G. Skerrett.....	101
Ventube.....	229
Venus Contains no Oxygen.....	162
*Vibrator Riddle.....	111
Villetard, H. *Marseilles Canal to the Rhone.....	55
Volcanoes, Eruption of (Editorial).....	271

W

Waste in Industry, Price Paid for. (Editorial).....	60
Water, Tensile Strength of.....	289
Water Transport to Reduce Rail Rates (Editorial).....	177
<i>Wealth and Income of the American People</i> . By Walter Renton Ingalls. (Book Review).....	178

Weather Conditions, Curious Things in Ordinary.....	296
Welcker, Rudolph. *Handling Bulk Materials of Various Kinds by Compressed Air Rotary Tank Cars.....	230
<i>Welding Machinery and Fabricating Equipment.</i> The David- Bournonville Co.....	31
*Well, Deep, Gaging Machine.....	235
*Western United Gas & Electric Co's High-Pressure Gas- Distribution System. C. W. Melcher.....	251
Wet Rope Kinks.....	240
White Motor Company Painting Plant.....	127
Winslow, G. W. *Scajaquada Creek, A Difficult Drilling Operation.....	46
Winters, S. R. *Accurate Measurements of Specific Heat of Ammonia.....	356
Winters, S. R. *Bursting Test Shows Strength of Cloth.....	70
Winters, S. R. *Compressed Air in the Cotton-Testing Labora- tory.....	297
Winters, S. R. *Device for Measuring Soil Pressures.....	226

Winters, S. R. *Hay Conditioner Uses Air Moisture.....	172
Winters, S. R. Killing Insects by the Use of Compressed Air..	75
Winters, S. R. *Standard Refrigerator Car Developed for Hauling Perishable Commodities.....	333
*Wire Brush, High Speed, for Cleaning.....	136
Wireless, Overseas Communication by. (Editorial).....	29
*Wireless Telephony. By Robert G. Skerrett.....	71
Wireless Waves to Communicate Underground.....	357
Wood, H. Novel Application of a Calyx Drill.....	19
<i>Words We Misspell in Business.</i> By Frank H. Virgetelly. (Book Review).....	93

Z

<i>Zoning Primer, A.</i> By Div. of Bldg. and Housing, Dept. of Commerce. (Book Review).....	302
---	-----